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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,011	06/21/2001	Kazuyuki Shigeta	35.C15479	4406

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NEW YORK, NY 10112

EXAMINER
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SEFER, AHMED N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/885,011

Applicant(s)

SHIGETA, KAZUYUKI

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 13, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 6, 8-11, 14, 15, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Funatsukuri et al. (JP 2000-98325).

Funatsukuri et al. disclose in figs. 1-3 an image display device comprising: an image display element 32 or liquid crystal (as in claim 17) for modulating incident light and displaying an image; and an illumination device for sequentially irradiating with light in each color said image display element, which is adapted to change an image displayed on said image display element in synchronization with the irradiation of the light to thereby recognize the image as a full color image, wherein said illumination device comprises a light source 1 for emitting white light; a plurality of color filter members 21-23 having a plurality of color area (as in claim 2) being rotatably arranged between said light source and said image display element and having mutually different characteristics; and a filter drive means 71d-73d for rotationally driving each of the plurality of color filter members individually, and wherein said illumination device further sequentially converts the white light emitted from said light source into each color of light by rotationally driving said color filter members and switches image quality of the full color image by switching said rotationally driven color filter members.

As to claim 6, Funatsukuri et al a plurality of color filter members are arranged so as to overlap each other at least in part.

As to claim 8, Funatsukuri et al disclose filter drive means driving one of the color filter members and stops the other color filter member.

As to claim 9, Funatsukuri et al disclose filter drive means simultaneously rotationally driving the plurality of color filter members.

As to claims 10 and 11, Funatsukuri et al. disclose switching of image qualities by means of the switching of said color filter members is conducted in response to switches.

As to claims 14 and 15, Funatsukuri et al disclose switching of the image quality by means of the switching of said color filter members is conducted in response to a control from a user input or via a communication from an external source (as in claim 15)

As to claim 19, Funatsukuri et al disclose, an image display element a spatial modulation display element having arrayed micro-mirrors 32.

5. Claims 1-3, 5, 10, 11, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatano et al. US Patent No. 5,805,243.

Hatano et al. disclose (see figs. 1-3 and 6 and col. 13, lines 25-43) an image display device comprising: an image display element 10 or liquid crystal (as in claim 17) for modulating incident light and displaying an image; and an illumination device for sequentially irradiating with light in each color said image display element, which is adapted to change an image displayed on said image display element in synchronization with the irradiation of the light to thereby recognize the image as a full color image, wherein said illumination device comprises a light source 16 for emitting white light; a plurality of color filter members 61, 62 having a plurality of color area (as in claim 2) being rotatably arranged between said light source and said image display element and having mutually different characteristics; and a filter drive means 67 for rotationally driving each of the plurality of color filter members individually, and wherein said illumination device further sequentially converts the white light emitted from said light source into each color of light by rotationally driving said color filter members and switches image quality of the full color image by switching said rotationally driven color filter members.

As to claim 3, Hatano et al. disclose the characteristics of said color filter members are mutually different from each other by virtue of the relative portions of the color filter members occupied by each of said plurality of color areas on one color filter member being different from the relative portions occupied by each of said plurality of color areas on the other color filter member.

As to claim 5, Hatano et al. disclose the characteristics of the color filter members are mutually different from each other by virtue of the number of the color areas on one color filter member being different from the number of color areas on the other color filter member.

As to claims 10 and 11, Hatano et al. disclose (see col. 3, lines 33-50), switching of image qualities by means of the switching of said color filter members is conducted in response to switches.

As to claim 19, Hatano et al. disclose, an image display element a spatial modulation display element having arrayed micro-mirrors.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16, 18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Funatsukuri et al. in view of Bohler et al. US PG-Pub 2002/0044445.

Funatsukuri et al discloses the device structure as recited, but do not specifically disclose switching of color filter members is conducted automatically.

Bohler et al. disclose in figs. 1, 2, 5 and 6 the advantages of switching color filter members automatically.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Bohler et al with the device of Funatsukuri et al, since that would reduce spoke time or time between segments of the color filter.

As to claims 18 and 19, Bohler et al disclose MEMS-type spatial modulation image display element having arrayed micro-mirrors (as in claim 19).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatano et al. in view of Bornhorst US Patent No. 4,800,474.

Hatano et al disclose the device structure as recited in claim 1, but do not specifically disclose a transmittancy characteristics.

Bornhorst discloses (see col. 3, lines 58-65) a plurality of color filter members having different transmittancy characteristics.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Bornhorst with the device of Hatano et al, since that would produce a perceived uniform graduation of colors across a spectrum.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatano et al. in view of Pettit US Patent No. 6,256,073.

Hatano et al disclose the device structure as recited in claim 1, but do not specifically disclose a color filter member having a white area.

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Pettit discloses (see col. 5, lines 1-17) a color filter member having a white area.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Pettit with the device of Hatano et al, since that would increase image brightness.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601.

ANS  
April 6, 2003

NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

